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IMMUNITY ANALYZING METHOD AND DEVICE

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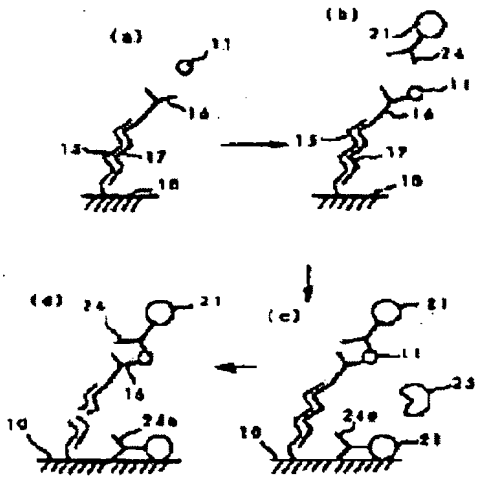
Abstract of **JP4273065**

PURPOSE:To obtain a high-sensitivity immunity analyzing method for trace organic components. CONSTITUTION:Particles used as labelled elements, which are proportional to the quantity of measured objects 11, are trapped into a reactive solid phase 10 through specific reaction such as antigen antibody reaction, and then isolated to count the number of particles in isolated liquid so that the quantity of measured objects can be found. Measured liquid including isolated elements is guided into a flow cell 1 to detect the fluorescence of pulses which arise in passing the particles through laser flux radiated from the direction perpendicular to the flow, and the number of pulses is counted to measure the particles 21. As the measurement is made after the labelled elements are trapped once into the reactive solid phase, meaning that the particles are isolated, it is not affected by the labelled elements combined with the solid phase unspecifically. The particles as the labelled elements are counted to realize highly-linear detection even at a low concentration.



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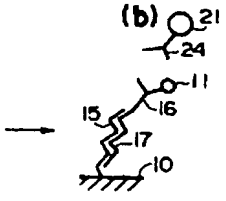
(54) Method for immunoassay and apparatus therefor.

(57) A method for immunoassay of a trace vital component is provided. Using fine particles as label or marker 21, the fine particles are captured on reaction solid phase 10 in proportion to an amount of analyte by a specific reaction such as antigen-antibody reaction. Then, the fine particles are liberated and the number of fine particles is counted to determine the amount of analyte. The solution to be assayed containing the liberated matters is introduced into flow cell 1 and pulse-like fluorescence emitted when the fine particles pass through a flux of laser light irradiated from the direction crossing the flow at the right angle is detected and the pulse is counted to count the number of fine particles 21.

The marker or label, i.e., the fine particles once captured on the reaction solid phase are liberated and then counted. Therefore, influence of the label non-specifically bound to the solid phase can be eliminated. By using the fine particles as the label and counting the number of the particles, detection having a high linearity can be realized even at a low concentration.

FIG. 4



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